CLAIMS

1. A helically-toothed-belt transmission device for transmitting driving force by meshing between a helically-toothed belt and a helically-toothed pulley, the device being characterized in that:

when denoting a tooth pitch as "Pt", a tooth helix angle as "θ", and a belt width of said helically-toothed belt as "W", said tooth helix angle "θ" is set in a range of

$-0.2 \leq 1 - W \cdot \tan\theta / Pt \leq 0.75$, and;

a backlash between said helically-toothed belt and said helically-toothed pulley is set to be from 1.6% to 3% of said tooth pitch "Pt".

2. A helically-toothed-belt transmission device for transmitting driving force by meshing between a helically-toothed belt and a helically-toothed pulley, the device being characterized in that:

when denoting a tooth pitch as "Pt", a tooth helix angle as "θ", and a belt width of said helically-toothed belt as "W", said tooth helix angle "θ" is set in a range of

$1 - W \cdot \tan\theta / Pt \leq 0$, and;

compressibility of said helically-toothed belt is set to be from 1.5% to 5%.